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EXAMINER

SHAW, JOSEPH D

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,740

Applicant(s)

HUBBARD, EDWARD A

Examiner

Joseph D Shaw

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.
2. The use of the trademarks RSA, 3DNow, Direct3D, DirectX, Java, Microsoft Windows 95, Microsoft Windows 98, AMD Athlon, and Intel Pentium III have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Gall et al. (6,356,929).

a. As per claim 1, Gall discloses a distributed processing system with a server coupled to a network coupled to a plurality of distributed devices (Fig. 2); the distributed devices are recruited (identified) to help process a job (col. 2, lines 4-7); operating parameters (Fig. 3, col. 2, lines 35-36), some specified by the distributed device (Group and Company); and utilizing the specified operating parameters to schedule job sharing (col. 2, lines 12-14, more specifically for operating parameters specified by the distributed device col. 8, lines 58-60).

b. As per claims 2 and 3, Gall discloses an operating parameter affiliation indication (Fig. 3, Company, Group, col. 8, lines 62-68, col.9 lines 1-9, wherein Group can specify a particular scientific project and Company can specify a particular educational institution).

c. As per claims 4 and 5, Gall discloses an operating parameter project type indication (Fig. 3, Group, wherein Group can be associated with a group of

clients dedicated to a specific project type and furthermore a specific scientific research).

6. Claims 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kraft et al. (6,112,225).

d. As per claim 11, Kraft discloses a distributed processing system with a coordinating computer (server system) coupled to a network coupled to peripheral computers (distributed devices)(Fig. 1); the idleness for the plurality of distributed devices is monitored (Fig. 6, col. 2, lines 22-27); idle distributed devices subscribe (are identified) to the coordinating computer (col. 2, lines 30-32); and the coordinating computer distributes subtasks to the subscribed computer accordingly (col. 2, lines 32-34).

e. As per claim 12, Kraft discloses using input/output activity of the peripheral computer to determine idleness (col. 8, lines 55-57).

f. As per claims 13 and 14, Kraft discloses that a peripheral computer can be deemed idle when the percent load on its processor (a subsystem) falls below a prescribed level (col. 8, lines 50-53).

7. Claims 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Peters et al. (6,415,373).

g. As per claims 21 and 22, Peters discloses a distributed processing system with an asset manager (server system) coupled to a network coupled to storage units and applications (distributed devices)(Fig. 1); the capabilities of the storage

units are identified (col. 6, lines 37-40); and the applications and storage units are aggregated so that the application devices process data to be stored on the storage units (col. 6, lines 26-37).

h. As per claims 23 and 24, Peters discloses a distributed processing system with an asset manager (server system) coupled to a network coupled to storage units and applications (distributed devices)(Fig. 1); the asset manager contains a database that maintains the capabilities of the storage units (col. 6, lines 37-40); and the applications and storage units are aggregated so that the application devices process data to be stored on the storage units (col. 6, lines 26-37).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gall et al. (6,356,929) in view of Grimshaw et al. ("The Legion Vision of a Worldwide Virtual Computer").

i. As per claim 6, Gall discloses the claimed invention described above. However, Gall does not explicitly teach allocating the processing capabilities of a distributed device between project types. Grimshaw teaches a distributed

processing system, each distributed device has control over its own resources, including: how much of a resource can be used and who can and cannot use it (page 41, first paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the capability of allocating processing capabilities on a distributed device as taught by Grimshaw in the system of Gall because this would allow for site autonomy and not require the distributed processing system to be a monolithic system, rather a composition of resources owned and controlled by a plurality of organizations as taught by Grimshaw (page 41, first paragraph).

10. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gall et al. (6,356,929) in view of Bonnell et al. (5,655,081).

j. As per claim 7, Gall discloses a distributed processing system with a server coupled to a network coupled to a plurality of distributed devices (Fig. 2); operating parameters (Fig. 3, col. 2, lines 35-36), some specified by the distributed device (Group and Company); and utilizing the specified operating parameters to schedule job sharing (col. 2, lines 12-14, more specifically for operating parameters specified by the distributed device col. 8, lines 58-60). However, Gall does not explicitly teach having a database coupled to the server for storing the use selected operating parameters. Bonnell discloses a distributed processing system that contains a managing software (containing a database) ran on a network management computer system (col. 6, lines 61-64,

Fig. 13), wherein the managing software monitors and manages resources present in the distributed processing network (col. 6, lines 64-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a database as taught by Bonnell in the system of Gall to maintain the operating parameters of distributed devices because it would increase automation and efficiency and decrease the complexity in network management as taught by Bonnell (col. 6, lines 20-24).

k. As per claim 8, Gall further discloses an operating parameter affiliation indication (Fig. 3, Company, Group, col. 8, lines 62-68, col.9 lines 1-9).

l. As per claim 9, Gall further discloses an operating parameter project type indication (Fig. 3, Group, wherein Group can be associated with a group of clients dedicated to a specific project).

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gall et al. (6,356,929) in view of Bonnell et al. (5,655,081) as applied to claims 7-9 above, and further in view of Grimshaw et al. ("The Legion Vision of a Worldwide Virtual Computer").

m. As per claim 10, Gall discloses the claimed invention modified by Bonnell as described above. However, the Gall/Bonnell invention does not explicitly teach allocating the processing capabilities of a distributed device between project types. Grimshaw teaches a distributed processing system, each distributed device has control over its own resources, including: how much of a

resource can be used and who can and cannot use it (page 41, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the capability of allocating processing capabilities on a distributed device as taught by Grimshaw in the system of Gall/Bonnell because this would allow for site autonomy and not require the distributed processing system to be a monolithic system, rather a composition of resources owned and controlled by a plurality of organizations as taught by Grimshaw (page 41, first paragraph).

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6,112,225) in view of Feinberg et al. (5,065,046).

n. As per claim 15, Kraft discloses the claimed invention as described above. However, Kraft does not explicitly teach scheduling process intensive workloads to idle distributed devices. Feinberg teaches a distributed processing system that involves idle client machines taking loads off other machines performing processor-intensive tasks (col. 9, lines 16-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the assigning of processor-intensive loads to idle client machines as taught by Feinberg in the system of Kraft because the distribution significantly improves the performance of processor-intensive tasks as taught by Feinberg (col. 9, lines 25-26).

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6,112,225) in view of Feinberg et al. (5,065,046) as applied to claim 15 above, and further in view of Humphrey (6,434,609).

o. As per claim 16, Kraft discloses the claimed invention modified by Feinberg as described above. However, the Kraft/Feinberg invention does not explicitly teach the process intensive workloads comprising of caching downstream transmissions for a network site broadcast. Humphrey teaches a global information network broadcasting system (a form of distributed processing system) wherein proxy servers (the distributed devices) cache web and other data transmitted downstream from the master server (Abstract, Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the caching of downstream transmissions in a broadcasting system as taught by Humphrey in the system of Kraft/Feinberg because caching on proxy servers requires less data to transit the backbones of the networks, reducing traffic, as taught by Humphrey (Abstract).

14. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6,112,225) in view of Bonnell et al. (5,655,081).

p. As per claim 17, Kraft discloses a distributed processing system with a coordinating computer (server system) coupled to a network coupled to peripheral computers (distributed devices)(Fig. 1); idle distributed devices subscribe (are identified) to the coordinating computer (col. 2, lines 30-32); and

the coordinating computer distributes subtasks to the subscribed computer accordingly (col. 2, lines 32-34). However, Kraft does not explicitly teach having a database coupled to the server system for storing the idleness information associated with the distributed devices. Bonnell discloses a distributed processing system that contains a managing software (containing a database) ran on a network management computer system (col. 6, lines 61-64, Fig. 13), wherein the managing software monitors and manages resources present in the distributed processing network (col. 6, lines 64-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a database as taught by Bonnell in the system of Kraft to maintain the operating idleness vectors of distributed devices because it would increase automation and efficiency and decrease the complexity in network management as taught by Bonnell (col. 6, lines 20-24).

q. As per claim 18, Kraft further discloses using input/output activity of the peripheral computer to determine idleness (col. 8, lines 55-57).

r. As per claim 19, Kraft discloses that a peripheral computer can be deemed idle when the percent load on its processor (a subsystem) falls below a prescribed level (col. 8, lines 50-53).

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6,112,225) in view of Bonnell et al. (5,655,081) as applied to claims 17-19 above, and further in view of Feinberg et al. (5,065,046).

s. As per claim 20, Kraft discloses the claimed invention modified by Bonnell as described above. However, the Kraft/Bonnell invention does not explicitly teach scheduling process intensive workloads to idle distributed devices. Feinberg teaches a distributed processing system that involves idle client machines taking loads off other machines performing processor-intensive tasks (col. 9, lines 16-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the assigning of processor-intensive loads to idle client machines as taught by Feinberg in the system of Kraft/Bonnell because the distribution significantly improves the performance of processor-intensive tasks as taught by Feinberg (col. 9, lines 25-26).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- t. Wesemann (6,434,594) – method of managing computer applications executed over a distributed processing system.
- u. Yamada (6,438,553) – method of distributing jobs over a computer system and managing them.
- v. Robertazzi et al. (6,370,560) – assigning job segments to distributed resources based on cost.
- w. Kisor (6,09,091) – assigning tasks to idle workstations.

- x. Downs et al. (6,249,836) – distributed processing of a task over a wide area network.
 - y. Florman (6,377,975) – interrogation of best-suited server to complete tasks.
 - z. Hawkins et al. (6,389,421) – handling of processor-intensive tasks in a data processing environment.
 - aa. Lumelsky et al. (6,516,350) – autonomous management of distributed resources.
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D Shaw whose telephone number is 703-305-0094. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 4:00 PM, and on alternate Fridays.
18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703-305-4003. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3718 for regular communications and 703-305-3718 for After Final communications.
19. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5484.

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Joseph Shaw
July 22, 2003



RUPAL DHARIA
PRIMARY EXAMINER